

REMARKS

Favorable consideration and allowance of the claims of the present application are respectfully requested.

In the present Official Action, the Examiner first objected to Claim 19 as allegedly comprising a minor informality, e.g., improper dependency being claimed. Applicant has amended Claim 19 in the manner so as to obviate the objection. The Examiner is respectfully requested to remove the objection.

Further in the Office Action, Claims 1-2, 5 and 17-20 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Pittel (US 2003/0095708) ("Pittel") in view of Fujisaki (US 6,011,865) ("Fujisaki").

Applicant respectfully disagrees.

Fujisaki, as mentioned in the present specification at paragraph [0006], is directed to a hybrid system implementing a combination of on-line handwriting recognition with an off-line one. On-line means that real-time parameters of writing are captured and used for recognition purposes - for example, how strokes are created etc. Off-line means, for example, implementation of a technique such as optical character recognition, e.g., OCR, where the text is already written - one doesn't have any information about HOW the text was written.

In the present application, as set forth in Claim 1, applicant has provided a system that combines two on-line systems: touch screen and camera - both of which provide dynamic - on-line - information about how the writing is created.

That is, as claimed in Claim 1, applicant's system provides a first dynamic handwriting recognition system capability, i.e., a touch screen generating dynamic

information associated with stylus writing; and a second dynamic handwriting recognition system capability, i.e., a digital image capture means mounted in a pervasive device for obtaining images of a stylus as a user writes on a touch screen, and processing the obtained images to extract non screen-related information associated with stylus manipulation by the user. The invention further provides for a handwriting recognition means receiving both the dynamic touch screen information and extracted non touch screen-related information from the processed images.

While the examiner in the rejection of Claim 1 (and independent Claims 9 and 17) indicates on page 3 of the Office Action that " Fujisaki ... teaches the combining of dynamic information... with the static touch screen information", applicant respectfully submits that the Examiner has mischaracterized the present invention in that in the present invention, the touch screen information is not static, rather it is dynamically generated information associated with stylus writing because touch screen provides not only actual text information but, in addition, parameters associated with the actual writing, like strokes, velocities, accelerations, etc.

Respectfully, Pittel is of no hope in this regard. Pittel does speak to using a digital camera for hand motion capturing in general and also handwriting recognition. However, the thrust of Pittel is the application of a camera with any portable device, i.e., a device characterized by Pittel as NOT HAVING a touch screen to perform handwriting and handmotion recognition. Even if touch screen is present, Pittel only provides for handwriting recognition based on digital camera information. There is no system, no software described that will do the handwriting recognition based on the touch screen - only camera information is used. For example, see Pittel at paragraph [0004], seven lines from the bottom where it is

explicitly stated that "The display is not touch sensitive", and see Pittel also at paragraph [0071] where it is described that the writing surface may be absent at all. Moreover, at paragraph [0076], Pittel appears to teach away from the present invention's use of a combined handwriting recognition system that receives both dynamic touch screen information and extracted non- touch screen-related information from the processed images, as Pittel indicates that the use of a camera would obviate the need for direct "tracking" on an LCD display and suggests the use of added sensors devices. Additionally, in Pittel, Claim 1 does not mention a combination of camera and touch screen inputs for recognition - only camera inputs as does Claim 19 of Pittel which explicitly claims that the display is not touch sensitive.

While the Examiner mentions tilt information helping the recognition as being described by Pittel, Dresevic and Schiller, it is submitted that tilt information is just one example of what can be obtained from the digital camera observing stylus movements. In the present application, e.g., in paragraph [0015] there is described the use "...additional information, such as tilt and/or other parameters needed for handwriting recognition". The same is said in paragraph [0028]- "The same scheme can be applicable for other kinds of information..."

Thus, in traversal of the Examiner's rejection, respectfully, Claim 1 (and rejected method Claim 9) is patentable over the combination of Pittel and Fujisaki.

While the Examiner has further rejected at least independent Claims 1 and 17 based on the combination of Pittel, Fujisaki and additionally cited reference to Hansen (US 5534893), applicant respectfully traverses.

Respectfully, applicant reiterates and applies the same arguments as provided in the traversal of Claim 1 to traverse the Examiner's rejections of Claim 17. That is, the present invention is directed to a pervasive device and system that provides a first dynamic handwriting recognition system capability, i.e., a touch screen generating dynamic information associated with stylus writing; and a second dynamic handwriting recognition system capability, i.e., a digital image capture means mounted in a pervasive device for obtaining images of a stylus as a user writes on a touch screen, and processing the obtained images to extract non screen-related information associated with stylus manipulation by the user; and, further provides for a handwriting recognition means receiving both said dynamic touch screen information and extracted non touch screen-related information from the processed images.

While Hansen has been cited as making up a deficiency of Pittel and Fujisaki, applicant disagrees. The Examiner states that "the use of cameras and touch pads on a portable electronic device such as a PDA was known in the art" (indicated in the Office Action at the top of page 6, citing Hansen at Fig. 12 and lines 5-13 of col. 7 of Hansen)—applicant is respectfully hard pressed to find such a teaching in the cited passage and, in fact, submit that the use of the term "camera" is not even mentioned in Hansen. Thus, Hansen appears duplicative with Fujisaki as merely describing a touch-screen/stylus device.

Thus, the Examiner is respectfully requested to withdraw the rejections of Claims 1-2, 5 and 17-20 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pittel in view of Fujisaki and, further, to withdraw the rejections of Claims 1-4, 6-8, 17-18 and 20-23 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pittel in view of Fujisaki and Hansen.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance be issued. If the Examiner believes that a telephone conference with the Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned, Applicants' attorney, at the following telephone number: (516) 742-4343.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steve Fischman", with a long horizontal flourish extending to the right.

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